and switched to Jòzef Nusbaum's term, *Golgi apparatus*.[21] Cajal went on to examine how its appearance varied with different cellular functions and with different experimental manipulations. Without endorsing the claim that it figured in secretion, Cajal noted a correlation between the presence of the Golgi apparatus in a cell and secretory activity and reported, in intestinal goblet cells that secrete mucus over the lining of the intestine, the appearance of tiny droplets of mucus in the Golgi region.

Progress in clarifying the structure and determining the function of the Golgi apparatus was slow. In 1924, Cowdry commented,

> Even now, twenty-five years after its discovery, we can only say that the Golgi apparatus is an area of the cytoplasm frequently (especially in higher forms) of reticular shape, often as large as the nucleus, and sometimes definitely located in relation to cellular polarity. Part of the material of which it is composed is soluble in alcohol, becomes blackened after prolonged treatment with osmic acid, and, after appropriate preliminary fixation, shows a marked affinity for silver salts. In addition it may occasionally be stained with resorcin-fuchsin, iron hemotoxylin, and other dyes, but the word "apparatus" is unfortunate because it carries with it the idea of a mechanism of a rather mechanical type. (Cowdry, 1924, p. 334)

Cowdry did report that the appearance of the Golgi apparatus was relatively constant in a particular cell type but varied across cell types so that "variations in its morphology are closely related to variations in cellular organization and function" (p. 334).

Variability in the appearance of the Golgi apparatus posed difficulties for cytologists. Kirkman and Severinghaus (1938a) reported that the following descriptions of the Golgi apparatus had been offered at different times: "a fibrous reticulum, network, ring, or cylinder, a very irregular fenestrated plate, a more or less incomplete hollow sphere, vesicle, or cup, a collection of small spheres, rodlets and platelets or discs, a series of anastomising canals, a group of vacuoles, and a differentiated region of homogeneous cytoplasm crossed by irregular interfaces" (p. 419).

I noted previously that Cajal correlated the appearance of the Golgi apparatus to cell secretion. Stronger evidence for its role in secretion stemmed from the work of Dimitry Nassonov (1923; 1924), who demonstrated the consistent

[21] Dröscher (1998, p. 429), commented that Nusbaum "included 'Golgi' as a tribute to its discoverer, but eliminated the word 'reticulum' or 'net' because he and his collaborators at the University of Lemberg (Lwòw) found that the disposition of the apparatus, especially in invertebrate cells, was not necessarily net-like, but predominantly in the form of single dictyosomes."